

## **RESPONSE TO COMMENTS**

### **NPDES PERMIT No. MA0101061 North Brookfield Wastewater Treatment Plant**

On August 18, 2006, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) released for public notice and comment a draft National Pollutant Discharge Elimination System (NPDES) permit for the North Brookfield Wastewater Treatment Plant in North Brookfield, Massachusetts. The draft permit was developed pursuant to an application from the Town of North Brookfield for the reissuance of its permit to discharge wastewater to the designated receiving water, the Forget-Me-Not Brook. The public comment period for this draft permit expired on September 16, 2006. Comments were received from Ms. Andrea F. Donlon of the Connecticut River Watershed Council in a letter dated September 15, 2006 and from Cindy Delpapa, Stream Ecologist, of the MA Riverways Program in a letter dated September 15, 2006.

After a review of the comments received, EPA has made a final decision to issue the permit authorizing this discharge. The following are the comments and EPA's response to those comments, including changes that have been made to the final permit from the draft as a result of the comments. The comment letters are part of the administrative record and are paraphrased herein. A copy of the final permit may be obtained by writing or by calling Mark Malone, EPA Municipal Permits Branch (CMP), 1 Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1619.

Minor changes to the draft permit have been made to reflect the most recent standardized permit language. These changes include the addition of the MassDEP website for reporting SSOs in Part 1. B. UNAUTHORIZED DISCHARGES of the permit and the revised Part II Standard Conditions. The Part II Standard Conditions have been revised to correct typographical and consistency issues.

Comments received from Ms. Andrea F. Donlon of the Connecticut River Watershed Council.

#### *Comment 1*

*Because the WWTP is the likely reason why the Forget-Me-Not Brook is water quality impaired, it appears to have been inappropriate to locate this treatment facility on such a small stream. The facility has not been complying with its permit limits for total phosphorus, total copper, total zinc, and total aluminum. It is not clear how or when the facility will come into compliance. The permit should establish deadlines for complying with the Clean Water Act.*

#### **Response 1**

EPA and the State are not authorized to include compliance schedules in permit reissuances for existing limits. In addition, two orders have been issued to the Town regarding noncompliance with its permit. With respect to the revised, more stringent phosphorus limit, there is no obligation to include compliance schedules in permits. During permit development and the Public Comment period the Town did not request a compliance schedule. We do not know and the Town may not know at this point what steps will be necessary to meet the permit limit. We

anticipate that a schedule to meet the permit limit will be established through an enforcement action.

*Comment 2*

*Seasonal limits, if necessary, should be made consistent for BOD, TSS, nutrients and dissolved oxygen (DO) such that the seasonal recreation period is April 1 to October 31.*

Response 2

Seasonal limits are set to address different water quality standards and uses. The BOD, TSS, and DO are seasonal limits to address the DO water quality criteria in the Forget-Me-Not Brook during the period of low flow. The nutrient seasonal limit is slightly longer encompassing the entire season of aquatic plant growth to address the algal growth downstream of the treatment plant. However, as pointed out by the commenter, the recreational season is generally recognized to begin April 1. Therefore, the disinfection period has been extended from May 1 to April 1.

*Comment 3*

*The lbs/day limits for BOD and TSS seem exceptionally high for such a tiny stream.*

Response 3

The mass limits are directly related to the concentration limits and the design flow as shown in the following example:

$$\text{BOD } 15 \text{ mg/l} * 0.76 \text{ mgd} * 8.34 \text{ (conversion factor)} = 95 \text{ lbs/day}$$

*Comment 4*

*This permit does not incorporate the new requirement of E. coli in addition to fecal coliform as in other recent draft permits. We recommend that the testing for E. coli be added to the final permit.*

Response 4

The State adopted an E. coli water quality standard on December 29, 2006, subsequent to the issuance of the North Brookfield draft permit. Although not yet approved by EPA, it is a state certification requirement. Consequently, the final permit does include a monthly E. coli monitoring requirement.

*Comment 5*

*The dilution factor of 1.0 should be used consistently for all effluent limitation calculations.*

## Response 5

The dilution factor of 1.0 is used for all effluent limitation calculations except for ammonia. As stated in the Fact Sheet, the critical 30-day, 10 year low flow is used in those calculations as recommended in the Federal Register, Volume 64, No. 245 published on December 22, 1999.

## Comment 6

*The Fact Sheet notes that the 1986 Quality Criteria for Water recommends an instream phosphorus concentration of 0.1 mg/l for any stream not discharging directly to lakes or impoundments. The proposed limits for phosphorus in the permit are 0.2 mg/l for April 1 to October 31 and 1.0 mg/l for November 1 to March 31. We recommend more stringent permit limits for this facility.*

## Response 6

In establishing an effluent limit necessary to achieve Massachusetts' water quality standard, EPA considered national guidance documents which recommend total phosphorus criteria for receiving waters. These include the 1986 Quality Criteria of Water (the Gold Book) and EPA's "Ecoregional Nutrient Criteria." These national guidances recommend instream phosphorus concentrations ranging from 0.1 mg/l to 0.024 mg/l. EPA also considered MassDEP's interpretation of the "highest and best practicable treatment" requirement in the Commonwealth's water quality standards. In the context of other permitting decisions where a TMDL has not yet been completed, MassDEP has consistently interpreted this requirement as an effluent limit of 0.2 mg/l for phosphorus. Based on the impairments in the receiving stream and the lack of available dilution, EPA has concluded that, at a minimum, a reduction to no more than 0.2 mg/l for phosphorus is required at the North Brookfield facility in order to achieve water quality standards. There is no significant dilution of North Brookfield's discharge in the Forget-Me-Not Brook under 7Q10 conditions; rather, the flow is effluent-dominated. (See **IV. Permit Basis and Explanation of Effluent Derivation** *Dilution Factor:* in Fact Sheet). If MassDEP adopts numeric criteria, a TMDL is completed, or additional water quality information shows that the phosphorus limits are not stringent enough to meet water quality standards, more stringent limits may be imposed.

## Comment 7

*The Fact sheet did not include an Endangered Species Consultation section. The Fact Sheet should state that it was determined there are no federally endangered species known to inhabit Forget-Me-Not Brook.*

## Response 7

There are no listed federally endangered species in the area of the North Brookfield WWTP, Worcester County.

Comments received from Ms. Cindy Delpapa of the MA Riverways Program.

*Comment 8*

*We urge the use of the more conservative dilution factor of 1.0 for the calculation of the seasonal ammonia limits.*

*Response 8*

See Response 5 above.

*Comment 9*

*Despite efforts of the facility to keep the phosphorus concentrations below the existing limits, it appears the receiving stream still suffers from eutrophication. This situation, as well as the likelihood the 0.2 mg/l concentration will still result in receiving water concentration above ecoregion recommendations, we strongly recommend load limits be added to the permit until more information provides justification for more stringent limits.*

*Response 9*

Mass limits are commonly established in order to satisfy antidegradation requirements when a facility is requesting an increase in its permitted flow. The Town of North Brookfield has not applied for an increase in flow. The adoption of phosphorus mass limits might be appropriate at a facility subject to extraneous flows due to I/I. While an I/I problem does exist, there are permit requirements for the control of I/I under Part 1.C.2. In addition, at the commenter's suggestion (see Comment 10 below), we have added language regarding additional reporting requirements when the average annual flow in a calendar year exceeds 80% of the design flow. These requirements should be adequate to address the issue of flow. Consequently, the addition of mass limits for phosphorus does not appear to be warranted at this time.

*Comment 10*

*The facility appears to have an I/I problem and the annual average flow may soon exceed 80% of the design flow. Since this plant has been treating monthly average flows in excess of 0.6 mgd since October 2005, it is appropriate that the permit include a standard requirement for the submittal of a report addressing the affect of increasing flows on compliance.*

*Response 10*

We agree and the current standard requirement has been added to the permit in Part I.A.1.e.

*Comment 11*

*We recommend that the requirement to report the result of sampling for any parameter above its required frequency be reported to EPA be added to the permit.*

*Response 11*

We agree and that requirement has been added to the permit in Part I.A.1.f.

*Comment 12*

*As the State is moving toward water quality standards using E. Coli, adding a testing requirement for E. coli in anticipation of this migration would be judicious.*

*Response 12*

See Response 4.

*Comment 13*

*The draft permit does not include a grace period to allow the permittee to undertake improvements to meet the new limitations. The impaired status of the receiving water makes a strong case for instituting the new limitations immediately. Can the facility make changes in the treatment process to meet the new effluent limitations? If the permittee is not able to meet the new limits, what options besides chronic noncompliance are available?*

*Response 13*

See Response 1.